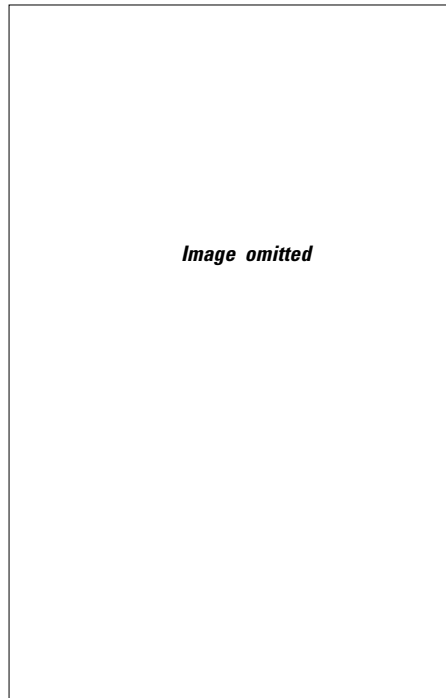


**Fish and Wildlife Service regional endangered species staffers have reported the following news:**

## Region 1

**Antioch Dunes National Wildlife Refuge (NWR)** The Service initiated a dune restoration project at Antioch Dunes NWR in California's bay area prior to the start of the winter rains. Heavy equipment helped us to recreate three large dunes in an area that was leveled in the mid-1800's for planting as a vineyard. The vineyard existed here until shortly after the Service acquired the refuge in 1980. In June 1999, we burned the site to control yellow star-thistle (*Centaurea solstitialis*), a non-native species. Future management plans include 2 more years of burning to reduce star-thistle density, followed by planting the dunes with two native endangered plants, the Antioch Dunes



*Image omitted*

### **Contra Costa wallflower**

*Photo by Paul Opler*

evening primrose (*Oenothera deltoides* ssp. *howellii*) and Contra Costa wallflower (*Erysimum capitatum* var. *angustatum*), as well as naked-stemmed buckwheat (*Eriogonum* ssp.), the host plant for the endangered Lange's metalmark butterfly (*Apodemia mormo langei*). Dune restoration at Antioch Dunes NWR was funded in part by a donation from Chevron.

On December 11, Service biologist Ivette Loredó, along with several refuge interns and volunteers, had a "planting party" at the refuge. They planted 425 Antioch Dunes evening primrose seedlings that were propagated at the Don Edwards San Francisco Bay NWR Native Plant Nursery. The plants were moved onto a refuge unit that had been burned 3 consecutive years to control star-thistle. The plants were individually marked and will be monitored for survival and regeneration.

**Habitat Acquisition** The Service has signed an agreement with the Catellus Development Corporation (formerly the realty branch of Santa Fe Pacific) that will add more than 450 acres (180 hectares) of vernal pool/tidal marsh ecotone environments to the Don Edwards San Francisco Bay NWR Complex. The process started when Catellus

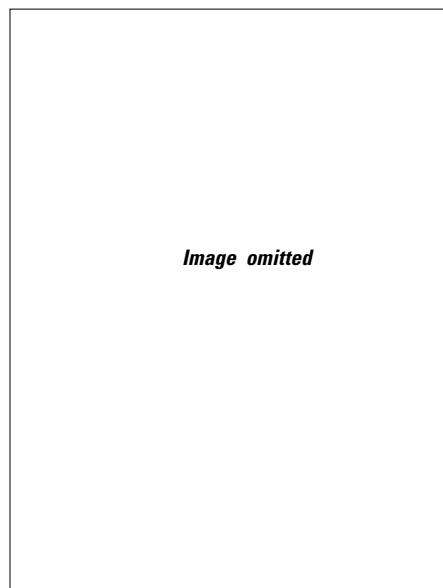


**California tiger salamander**

*Photo by Kelly Geer*

proposed an 800-acre (325-ha) high-tech development adjacent to the refuge's Warm Springs Seasonal Wetlands Unit in Fremont, Alameda County. The property turned out to support more than 100 acres (40 ha) of seasonal wetlands, including habitat of such endangered species as the Contra Costa goldfields (*Lasthenia conjugens*), vernal pool tadpole shrimp (*Lepidurus packardii*), and California tiger salamander (*Ambystoma californiense*). All three of these species also occur on the adjacent refuge unit.

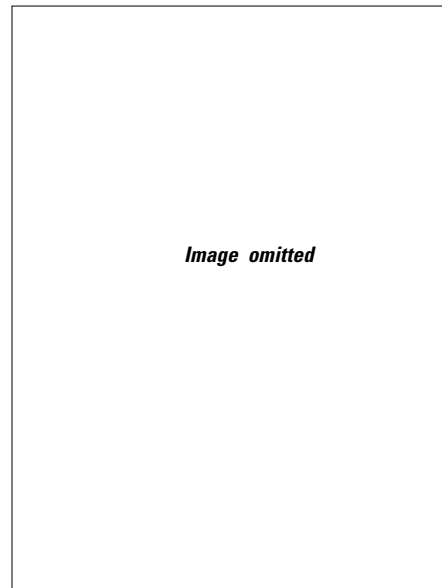
After a joint examination of the project and related issues by the Service, Environmental Protection Agency, Army Corps of Engineers, California Department of Fish and Game, California State Water Resources Control Board, and City of Fremont, the Catellus Corporation offered to donate



*Image omitted*

### **Antioch Dunes evening-primrose**

*Photo by Joe Dowhan*



*Image omitted*

### **Lange's metalmark butterfly**

*Photo by Jerry Powell*

the wettest and most biologically valuable portions of the property and two smaller off-site parcels to the refuge. The larger additions will enhance the viability of the unique goldfields, tadpole shrimp, and tiger salamander populations on the refuge, as well as provide important resting, wintering, and breeding habitat for migratory waterfowl and shorebirds. The Catellus Corporation also agreed to provide for a perpetual endowment to fund ongoing management of the donated lands by the Service.

**Pearl Harbor NWR** The Nature Conservancy of Hawaii (TNC) extended many helping hands in an effort to enhance habitat for endangered waterbird species on Pearl Harbor NWR's Honolulu Unit. As part of TNC's Staff Development Day, 45 employees from all over Hawaii donated a full day of hard work to help a Service crew protect and restore habitat, remove invasive plants, and improve the perimeter fence. Two Hawaiian chanters very beautifully blessed the day's activities. Without TNC's efforts, our limited maintenance crew would have been hard pressed to accomplish these worthy tasks in such a timely manner. *Mahalo* to TNC for their partnership helping to restore lands "from the mountains to the sea."

**Lahontan Cutthroat Trout** (*Oncorhynchus clarki benshawii*) This threatened fish has been successfully reared at the Lahontan National Fish Hatchery in Nevada since 1967 as a part of coordinated efforts involving the hatchery, Pyramid Lake Paiute Tribe, and Nevada Division of Wildlife. This past winter, an outbreak of Furunculosis disease (caused by the bacterium *Aeromonas salmonicida*) struck the hatchery, causing the first major setback in meeting reintroduction goals since the program's inception. The hatchery discovered the outbreak in late November and experimented with several medications, with assistance from the Service's California/Nevada Fish Health Center, to control or kill the bacteria. According to Hatchery Manager Larry Marchant, the fish did not respond well initially to medication because water limits force the hatchery to re-use about 65 percent of its water. As a result, the Service and the Pyramid Lake Paiute Tribe determined that the best course of action was to euthanize 300,000 production fish that had been targeted for release into Pyramid



**Lahontan cutthroat trout**

USFWS photo

Lake. The remaining 200,000 fish were placed on single pass fresh water and treated with antibiotics. Most of these fish responded well and were subsequently released into Walker Lake.

Complete station disinfection has since taken place since this incident occurred and 600,000 new production fish are awaiting release next year. However, there has still been no positive determination as to how the disease was introduced into the hatchery, and work to answer this question continues. The most probable cause is that birds swimming in the East Fork of the Carson River, which flows behind the hatchery, carried dirt or water into the fish raceways.

The hatchery releases approximately half a million Lahontan cutthroat trout into the Walker and Pyramid lake systems each year. This year marks the first time that the hatchery has been unable to meet its release goals. Recovery plans for the Lahontan cutthroat trout include hatchery propagation of genetically appropriate fish to maintain lacustrine populations until dams are removed or fish passages have been installed on the Truckee and Walker rivers, at which time this threatened species can become self-sustaining once again.

**Salmon** The Service released more than 30,000 endangered winter-run chinook salmon (*Oncorhynchus tshawytscha*) young from Livingston Stone into the Sacramento River on January 27. Approximately 26,500 of the fish resulted from 23 matings of natural-origin adults (9 females and 14 males), and the rest resulted from the matings of 20 captive broodstock females with 14 natural-origin males. An additional 1,204 juveniles have been retained for rearing in the winter-run chinook salmon captive broodstock program at Bodega Marine Laboratory, Steinhart Aquarium, and Livingston Stone NFH.

We continue to improve the Fish and Wildlife Service's Endangered Species Program web page. Some of the new features and changes we've made so far this year are summarized below. Please let us know what you think by responding to our web team at [julia\\_bumbaca@fws.gov](mailto:julia_bumbaca@fws.gov).

We get many requests for counts of threatened and endangered species, so we created a web page just for species statistics:

<http://endangered.fws.gov/stats/index.html>

Since many federally listed species occur on private lands, we now have a web page called "Tools for Private Landowners":

<http://endangered.fws.gov/landowner/index.html>

Our fact sheets, publications, and brochures have been consolidated at

<http://endangered.fws.gov/education/index.html>

We've improved access to our species lists with the "Wildlife and Plants" page, where you can retrieve species state lists, state maps and more:

<http://endangered.fws.gov/wildlife.html>

The past 10 years of recovery plans are now available online. For a recovery plan finished between 1989 to 1999, you can go to

<http://endangered.fws.gov/recovery/recplans/index.htm>

We've begun to include a regular "Creature Feature" on our home page. Access our current Creature Feature at our home page and our archive of features at

<http://endangered.fws.gov/wildlife.html#features>

There is now a 'questions' web page to help answer our frequently asked questions at

<http://endangered.fws.gov/questions.html>

We've also improved our search page at

<http://endangered.fws.gov/search.html>

Watch for more in the months to come as we work to make our site more informative and easier to use.

*Prepared by Julia Bumbaca of the Division of Endangered Species in Arlington, Virginia.*

From October 1999 through January 2000, the Fish and Wildlife Service and National Marine Fisheries Service (NMFS) published the following Endangered Species Act listing actions in the *Federal Register*. The full text of each proposed and final rule can be accessed through our website:

<http://endangered.fws.gov>.

## Proposed Rules

**California Tiger Salamander (*Ambystoma californiense*)** An emergency rule to give immediate temporary protection to the Santa Barbara County population of the California tiger salamander was published by the Service in the January 19 *Federal Register*. The Service took this unusual step because of imminent threats to the population's survival. Concurrently, the Service published a proposal to give the population long-term protection as an endangered species.



**California tiger salamander**

Photo by Kelly Geer

The California tiger salamander is a large, stocky, terrestrial amphibian with a broad, rounded snout. An adult male can reach a total length of up to about 8 inches (20 centimeters). These animals are marked with white or pale yellow spots or bars on a black background. They inhabit low-elevation vernal pools and ephemeral ponds, and are associated with coastal scrub, grassland, and oak savanna plant communities. California tiger salamanders also use burrows created by small mammals, especially ground squirrels and pocket gophers. The population in Santa Barbara County is separated from other populations by the La Panza and Sierra Madre mountain ranges.

Santa Barbara County is experiencing rapid changes in land use. Of the salamander's 14 documented breeding sites and associated uplands in the county, half have been destroyed or degraded severely in the past 18 months. Many of the other sites where the California tiger salamander still survives are being converted from cattle pastures to intensive agricultural uses, such as vineyards and row crop production. Other lands are rapidly being developed for urbanization and other uses. The emergency rule protects the Santa Barbara County population of the California tiger salamander for 240 days, during which the Service will proceed with its proposal to list the population as endangered. In the meantime, the Service is looking at ways to work with landowners to conserve the species while allowing economic activities to continue. The County of Santa Barbara supports the Service's action and is working with our agency to preserve existing habitat.

## San Diego Ambrosia (*Ambrosia pumila*)

A herbaceous perennial in the buttercup family (Asteraceae), this plant is native to San Diego and Riverside counties in southern California and parts of Baja California, Mexico. Of the 34 populations historically known in California, only 13 remain, and most of those are vulnerable to further habitat loss and fragmentation. The species is also rare and threatened by habitat loss in Mexico. On December 29, the Service proposed to list the San Diego ambrosia as endangered.

The short, fuzzy-stemmed plant arises from a branched system of rhizome-like roots and produces small clusters of yellowish flowers. It is primarily restricted to flat or sloping grasslands, often along valley bottoms or areas adjacent to vernal pools. The threats to its survival include urban and recreational development, road construction and maintenance, competition from non-native plants, trampling by humans and horses, and off-road vehicle use. Some populations of the San Diego ambrosia receive protection under existing habitat conservation plans drawn up for southern California's many other endangered plants and animals, but not enough to ensure the ambrosia's survival.

**Mountain Yellow-legged Frog (*Rana muscosa*)** Fewer than 100 individuals of the mountain yellow-legged frog are known to survive in the mountains of southern California, and on December 22 the Service proposed to list this population as endangered.

Prior to the 1960's, mountain yellow-legged frogs were abundant in the southern California mountains, where they spend their entire life cycle in and around cool springs and snow-fed streams. Since then, however, they have disappeared from almost 99 percent of their southern range for reasons that are not fully understood. One factor may be predation by rainbow trout (*Oncorhynchus mykiss*) that were introduced for sport fishing. Biologists also are investigating the possible role of airborne contaminants in what otherwise appears to be pristine frog habitat in the Sierra Nevada. The remaining mountain yellow-legged frogs in southern California occur only on land managed by the U.S. Forest Service in three general areas: the San Gabriel Mountains, the San Bernardino Mountains, and Mount Jacinto. The frog habitats are now protected from development and other uses.

The listing proposal does not apply to the northern population of mountain yellow-legged frogs, which extends in the Sierra Nevada from Plumas County to southern Tulare County, California, and a small part of Nevada near Lake Tahoe.

## Spalding's Catchfly (*Silene spaldingii*)

A long-lived perennial herb in the pink or carnation family (Caryophyllaceae), Spalding's catchfly has small greenish-white flowers and foliage covered with sticky hairs (which accounts for the "catchfly" name). This species is native to Palouse prairie habitats in parts of west-central Idaho, northeastern Oregon, western Montana, eastern Washington, and an adjacent area in British Columbia, Canada. Almost all of its former habitat has been lost, and most of the remaining populations are isolated and extremely small. On November 17, the Service proposed to list Spalding's catchfly as a threatened species.

The once abundant native grasslands in this region have been reduced by over 95 percent during

the past century. Most have been destroyed or altered by conversion to agricultural use, grazing and trampling by livestock, herbicide treatments, and competition from non-native plants. Fire suppression, which allows the encroachment of woody vegetation into grasslands, also changes the open habitat this plant needs. The Service has already begun working with landowners and the appropriate Federal and State agencies to identify and reduce threats to the species.



**Atlantic salmon**

USFWS photo by William Hartley

**Atlantic Salmon (*Salmo salar*)** On November 17, the Service and NMFS jointly proposed to list the wild stocks of this species in the Gulf of Maine as endangered, based on evidence that the Gulf of Maine Atlantic salmon (a distinct population segment) is in danger of extinction. These stocks, the last known naturally reproducing populations of Atlantic salmon in the U.S., remain at very low levels and face continuing threats.

Native Atlantic salmon stocks in "Down East" Maine were originally proposed in 1995 for listing as threatened. In 1997, before the listing was made final, the State of Maine submitted an Atlantic Salmon Conservation Plan to the Service and NMFS. Both agencies concluded that implementation of the plan would preclude the need to list, and they withdrew the proposal on December 18, 1997.

In July 1999, the Service and NMFS updated the status review of the Atlantic salmon and concluded that the Gulf of Maine population is in danger of extinction. This conclusion is based on the following findings:

- documented returns of adult salmon have remained low,
- the survival of presmolt salmon has been lower than expected,
- the detection of a new disease led to the de-

struction of the Pleasant River broodstock,

- a disease from European fish imported for aquaculture has struck the Canadian aquaculture industry and spread toward the U.S. border,
- the use of non-North American strains of Atlantic salmon in the U.S. aquaculture industry has increased,
- aquaculture escapees continue to be detected in the wild, where they interbreed and compete with native salmon, and
- salmon habitat quality continues to be threatened by water withdrawals and sedimentation.

Although the State of Maine's conservation plan would not by itself ensure against the extinction of wild Atlantic salmon stocks, implementing the plan is expected to be vital to the species' recovery.

**Critical Habitat** In the December 10 *Federal Register*, the Service proposed a formal designation of Critical Habitat for two threatened fish species native to Arizona and New Mexico, the spikedace (*Meda fulgida*) and loach minnow (*Tiaroga cobitis*). Critical Habitat refers to specific geographic areas that contain environmental qualities essential for the conservation of threatened or endangered species.

The proposed Critical Habitat for the spikedace and loach minnow totals approximately 894 miles (1,443 kilometers). It includes portions of the Gila, San Francisco, Blue, Black, Verde, and San Pedro rivers, and some of their tributaries, in Apache, Cochise, Gila, Graham, Greenlee, Pinal, Pima, and Yavapai counties in Arizona and Catron, Grant, and Hildago counties in New Mexico.



**Proposed critical habitat on the Verde River**

USFWS photo

Critical Habitat designations have no impact on landowners taking actions on their property that do not involve Federal funding or permits. Such designations apply only to Federal agencies, which are required to avoid funding, authorizing, or carrying out any actions that would adversely modify the Critical Habitat. Economic activities such as grazing can be compatible with conservation of the spikedace and loach minnow provided that their habitat is maintained in good condition. Detailed descriptions and maps of the proposed Critical Habitat areas are available in the December 10 *Federal Register*.

## Final Rules

**Newcomb's Snail (*Erinna newcombi*)** A small freshwater mollusk, Newcomb's snail is found only in remote waterfalls, seeps, and springs of six stream systems on the Hawaiian island of Kaua'i. The Service listed Newcomb's snail on January 26 as a threatened species primarily because of predation by a variety of non-native species, including fish, snails, frogs, and flies. Other threats include water development projects that could affect the spring habitats upon which this species depends.

**Two California Plants** Two plant species native to coastal habitats in Sonoma and Marin counties, California, were listed on January 26 as endangered. Baker's larkspur (*Delphinium bakeri*) and the yellow larkspur (*Delphinium luteum*), perennial herbs in the buttercup family (Ranunculaceae), are threatened by habitat loss and degradation, domestic sheep grazing, and overcollection.

**Three Oregon Species** Three rare species (an insect and two plants) restricted primarily to native prairie habitat in the Willamette Valley of Oregon received Endangered Species Act protection on January 25. The Willamette daisy (*Erigeron decumbens* var. *decumbens*) and Fender's blue butterfly (*Icaricia icarioides fenderi*) were listed as endangered, while Kinkaid's lupine (*Lupinus sulphureus* ssp. *kinkaidii*) received the somewhat less critical classification of threatened. The widespread loss of the region's once abundant prairie habitat to commercial and residential develop-



Image omitted

## Kinkaid's lupine

Photo by Paul Hammond

ment, agriculture, and silviculture, along with impacts from herbicide use and overcollection, led to the decline of all three species.

**Rough Popcornflower (*Plagiobothrys hirtus*)** The Service listed another Oregon plant, the rough popcornflower, as endangered on January 25. This herb in the borage family (Boraginaceae) grows only in seasonal wetlands in the Umpqua Valley of Douglas County, Oregon. It is threatened by habitat loss or degradation (e.g., development, draining or filling of wetland habitats), livestock grazing, and competition from native and non-native plant species.



**Rough popcornflower**

USFWS photo

**Two Cave Animals** Two cave-dwelling invertebrates found only on the Hawaiian island of Kaua'i were listed January 14 as endangered. The Kaua'i cave wolf spider (*Adelocosa anops*) and Kaua'i cave isopod (*Spelaeorchestia koloana*) are small, blind creatures adapted to life in moist lava tubes and adjacent crevices. They are threatened by surface activities such as vegetation removal, grading, filling, paving, and agricultural develop-

Image omitted

## Kaua'i cave wolf spider

Photo by William Mull

ment that alter cave environments. Both of these animals are also susceptible to the use of chemical and biological pest controls that are employed to control invasive non-native insects such as ants and cockroaches.

**California Bighorn Sheep (*Ovis canadensis californiana*)** A distinct population of California bighorn sheep in the Sierra Nevada, first given emergency protection in April 1999, received long-term protection as an endangered species on January 3, 2000. The greatest danger to this population is predation by mountain lions (*Puma concolor*) and, to a lesser extent, coyotes (*Canis latrans*). Diseases spread by domestic sheep that



**Bighorn sheep**

Corel Corp. photo

graze in nearby areas also are a chronic threat to bighorns. A recovery plan for this endangered population of California bighorns will likely address potential changes in the grazing of domestic in adjacent areas, captive breeding, and localized predator control.

**Wenatchee Mountains Checker-mallow (*Sidalcea oregana* var. *calva*)** A perennial in the mallow family (Malvaceae), this rare plant grows in moist meadows in the Wenatchee Mountains of Chelan County, Washington. The primary threats to its survival are habitat loss or degradation due to agriculture and rural residential development, other land uses that change habitat hydrology, livestock grazing, competition from native and non-native plants, recreational activities, and fire suppression. On December 22, the Service listed the Wenatchee Mountains checker-mallow as endangered.



**Wenatchee Mountains checker-mallow**

USFWS photo by Ted Thomas

**Chinook Salmon (*Oncorhynchus tshawytscha*)** Two "evolutionary significant units" or ESUs (a designation used by NMFS in classifying Pacific salmonids) of chinook salmon in California were listed December 29 as threatened. The Central Valley and California Coastal ESUs, like many other runs of Pacific salmon, have been reduced to a vulnerable status by widespread habitat changes and other factors.

**Gentner's Fritillary (*Fritillaria gentneri*)** Another Oregon plant, and one of the State's rarest, is Gentner's fritillary, a member of the lily family

(Liliaceae) with showy red and yellow flowers. It grows in dry, open woodlands at scattered sites in the Rogue and Illinois River drainages in Josephine and Jackson counties. Gentner's fritillary is threatened by residential development, agricultural activities, logging, off-road vehicle use, collection for wildflower gardens, and road and trail construction. On December 10, the Service listed this species as endangered.

**Zapata Bladderpod (*Lesquerella thamnophila*)** This herbaceous perennial in the mustard family (Brassicaceae) is currently known from only four locations in Starr and Zapata counties, Texas. Zapata's bladderpod is threatened by increased urban development, roadway construction, invasions of exotic plants, increased oil and gas development, conversion of native plant communities to pastures, and overgrazing. On November 22, the Service listed it as endangered.

**Bull Trout (*Salvelinus confluentus*)** Two more populations of bull trout were listed November 1 as threatened, completing the listing of all bull trout populations in the conterminous U.S. under the Endangered Species Act. The new listings will protect bull trout populations in the Coastal-Puget Sound area of northwestern Washington and the St. Mary-Belly River area of northwestern Montana, east of the Continental Divide. This decision will not lead to additional restrictions on fishing in either area because the Service included a special rule to allow sport fishing when done in compliance with existing state, tribal, and national park regulations.

Bull trout are threatened by the combined effects of 1) habitat degradation and fragmentation associated with water diversion, road construction, mining, and grazing; 2) the blockage of migratory corridors by dams and other diversion structures; 3) reduced water quality; 4) entrainment (a process by which aquatic organisms are pulled through a diversion or other device) into diversion channels; 5) incidental catch by anglers; and 6) non-native species. The previously listed bull trout populations inhabit the Klamath, Columbia, and Jarbidge River systems.



**Deseret milk-vetch**

Photo by M. A. Franklin

**Deseret Milk-vetch (*Astragalus desereticus*)** The single known population of this plant, a slow-growing herbaceous perennial in the bean family (Fabaceae), is found in Utah County, Utah, near the town of Birdseye. It is vulnerable to residential development, highway widening, and livestock grazing and trampling. On October 20, the Service listed the Deseret milk-vetch as a threatened species.

**Pecos Sunflower (*Helianthus paradoxus*)** Another plant listed on October 20 as threatened is the Pecos sunflower, a large, showy plant in the family Asteraceae. It grows in desert wetlands of



**Pecos sunflower**

USFWS photo

New Mexico (Cibola, Valencia, Guadalupe, and Chaves counties) and west Texas (Pecos and Reeves counties). The Pecos sunflower is threatened by

the loss of wetland habitats due to groundwater depletion, water diversions, wetland filling, and the growth of a non-native shrub, the tamarisk or salt-cedar (*Tamarix* sp.).

**Devils River Minnow (*Dionda diaboli*)** This small fish currently is known to exist at only three locations in Val Verde and Kinney counties, Texas, and one drainage in the state of Coahuila, Mexico. It has gone from one of the most abundant fish species in the Devils River system of Texas to one of the river's least abundant species. The Devils River minnow has declined because of habitat loss to dam construction, dewatering of springs, other stream modifications, and, possibly, predation by introduced smallmouth bass (*Micropterus lomieu*). The Service listed this species on October 20 as threatened.



**Virgin River chub**














Photo by Coleen Clemmer

**Critical Habitats** About 87.5 miles (140 km) of the Virgin River and its floodplain in Arizona, Nevada, and Utah were designated as Critical Habitat for two endangered fish, the woundfin (*Plagopterus argentissimus*) and the Virgin River chub (*Gila seminuda*), on January 26. As listed species, both fish already have Endangered Species Act protection; the Critical Habitat designation will apply only to the actions of federal agencies.

The Service published another Critical Habitat designation on December 7 for the Pacific Coast population of the western snowy plover (*Charadrius alexandrinus nivosus*), which is listed as threatened. These birds breed primarily on coastal beaches from southern Washington to southern Baja California, Mexico. The 28 segments designated as Critical Habitat total about 180 miles (290 km).

# BOX SCORE

Listings and Recovery Plans as of April 30, 2000

GROUP	ENDANGERED		THREATENED		TOTAL LISTINGS	U.S. SPECIES W/ PLANS**
	U.S.	FOREIGN	U.S.	FOREIGN		
 MAMMALS	63	251	9	16	339	47
 BIRDS	77	176	15	6	274	76
 REPTILES	14	65	22	14	115	30
 AMPHIBIANS	10	8	8	1	27	12
 FISHES	68	11	44	0	123	90
 SNAILS	20	1	11	0	32	20
 CLAMS	61	2	8	0	71	45
 CRUSTACEANS	18	0	3	0	21	12
 INSECTS	30	4	8	0	42	27
 ARACHNIDS	6	0	0	0	6	5
ANIMAL SUBTOTAL	367	518	128	37	1,050	364
 FLOWERING PLANTS	565	1	139	0	705	528
 CONIFERS	2	0	1	2	5	2
 FERNS AND OTHERS	26	0	2	0	28	28
PLANT SUBTOTAL	593	1	142	2	738	558
GRAND TOTAL	960	519	270	39	1,788*	922

**TOTAL U.S. ENDANGERED:** 960 (367 animals, 593 plants)

**TOTAL U.S. THREATENED:** 270 (128 animals, 142 plants)

**TOTAL U.S. LISTED:** 1,230 (495 animals\*\*\*, 735 plants)

\*Separate populations of a species listed both as Endangered and Threatened are tallied once, for the endangered population only. Those species are the argali, chimpanzee, leopard, Stellar sea lion, gray wolf, piping plover, roseate tern, green sea turtle, saltwater crocodile, and olive ridley sea turtle. For the

purposes of the Endangered Species Act, the term "species" can mean a species, subspecies, or distinct vertebrate population. Several entries also represent entire genera or even families.

\*\*There are 530 approved recovery plans. Some recovery plans cover more than one species, and a few species have separate plans covering different parts of their ranges. Recovery plans are drawn up only for listed species that occur in the United States.

\*\*\*Nine animal species have dual status in the U.S.

**ENDANGERED**  
*Species*  
**BULLETIN**

*U.S. Department of the Interior  
Fish and Wildlife Service  
Washington, D.C. 20240*

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